

**Ms. Sue Ann Werling
Moore Langen Printing
200 Hulman Street
Terre Haute, IN 47802**

October 8, 2003

**Re: Registered Construction and Operation Status,
167-18171-000136**

Dear Ms. Werling:

The application from Moore Langen Printing Company, received on August 6, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following sheetfeed offset printing process, to be located at 200 Hulman Street, Terre Haute, Indiana, is classified as registered:

- (a) One (1) OMCSA sheetfeed offset printing press, identified as press P-1, with a maximum sheet size of 40" x 28" and a maximum capacity of 3,000 sheets per hour, using no control, and exhausting to ambient.
- (b) One (1) OMCSA sheetfeed offset printing press, identified as press P-2, with a maximum sheet size of 40" x 28" and a maximum capacity of 3,000 sheets per hour, using no control, and exhausting to ambient.
- (c) One (1) Mitsu sheetfeed offset printing press, identified as press P-3, with a maximum sheet size of 40" x 28" and a maximum capacity of 13,000 sheets per hour, using no control, and exhausting to ambient.
- (d) One (1) Mitsu sheetfeed offset printing press, identified as press P-4, with a maximum sheet size of 40" x 28" and a maximum capacity of 10,000 sheets per hour, using no control, and exhausting to ambient.
- (e) One (1) Mitsu sheetfeed offset printing press, identified as press P-5, with a maximum sheet size of 28" x 20.5" and a maximum capacity of 9,000 sheets per hour, using no control, and exhausting to ambient.
- (f) One (1) Mitsu sheetfeed offset printing press, identified as press P-6, with a maximum sheet size of 28" x 20.5" and a maximum capacity of 9,000 sheets per hour, using no control, and exhausting to ambient.
- (g) One (1) Sakurai sheetfeed offset printing press, identified as press P-7, with a maximum sheet size of 40" x 28" and a maximum capacity of 2,000 sheets per hour, using no control, and exhausting to ambient.
- (h) One (1) Heidelberg sheetfeed offset printing press, identified as press P-8, with a maximum sheet size of 40" x 28" and a maximum capacity of 9,000 sheets per hour, using no control, and exhausting to ambient.
- (i) One (1) Ryobi sheetfeed offset printing press, identified as press P-9, with a maximum

sheet size of 12" x 8" and a maximum capacity of 2,000 sheets per hour, using no control, and exhausting to ambient.

- (j) One (1) Ryobi sheetfeed offset printing press, identified as press P-10, with a maximum sheet size of 20" x 12" and a maximum capacity of 3,000 sheets per hour, using no control, and exhausting to ambient.

The following conditions shall be applicable:

Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

This registration is the first air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

Any change or modification which may increase the potential to emit a combination of HAPs or VOC to twenty-five (25) tons per year or a single HAP to ten (10) tons per year from this source shall require approval from IDEM, OAQ prior to making the change.

An authorized individual shall provide an annual notice to the Vigo County Air Pollution Control Office that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, Indiana 47807**

no later than January 31 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Vigo County Air Pollution Control Office if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original Signed By

George M. Needham
Director
Vigo County Air Pollution Control

cc:
Mindy Hahn, IDEM
Winter Bottum, IDEM

Registration

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

Company Name:	Moore Langen Printing Company
Address:	200 Hulman Street
City:	Terre Haute, IN 47802
Authorized individual:	
Phone #:	
Registration #:	167-18171-000136

I hereby certify that Moore Langen Printing Company is still in operation and is in compliance with the requirements of Registration 167-18171-00136.

Name (typed):
Title:
Signature:
Date:

**Indiana Department of Environmental Management
Office of Air Quality And
Vigo County Air Pollution Control**

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name: Moore Langen Printing Company
Source Location: 200Hulman Street Terre Haute, IN 47802
County: Vigo
SIC Code: 2752
Operation Permit No.: 167-18171-00136
Permit Reviewer: Scott B. Sines

The Office of Air Quality (OAQ) and Vigo County Air Pollution Control (VCAPC) have reviewed an application from Moore Langen Printing Company relating to the construction and operation of a Sheetfeed Offset Printing process.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) OMCSA sheetfeed offset printing press, identified as press P-1, with a maximum sheet size of 40" x 28" and a maximum capacity of 3,000 sheets per hour, using no control, and exhausting to ambient.
- (b) One (1) OMCSA sheetfeed offset printing press, identified as press P-2, with a maximum sheet size of 40" x 28" and a maximum capacity of 3,000 sheets per hour, using no control, and exhausting to ambient.
- (c) One (1) Mitsu sheetfeed offset printing press, identified as press P-3, with a maximum sheet size of 40" x 28" and a maximum capacity of 13,000 sheets per hour, using no control, and exhausting to ambient.
- (d) One (1) Mitsu sheetfeed offset printing press, identified as press P-4, with a maximum sheet size of 40" x 28" and a maximum capacity of 10,000 sheets per hour, using no control, and exhausting to ambient.
- (e) One (1) Mitsu sheetfeed offset printing press, identified as press P-5, with a maximum sheet size of 28" x 20.5" and a maximum capacity of 9,000 sheets per hour, using no control, and exhausting to ambient.
- (f) One (1) Mitsu sheetfeed offset printing press, identified as press P-6, with a maximum sheet size of 28" x 20.5" and a maximum capacity of 9,000 sheets per hour, using no control, and exhausting to ambient.
- (g) One (1) Sakurai sheetfeed offset printing press, identified as press P-7, with a maximum sheet size of 40" x 28" and a maximum capacity of 2,000 sheets per hour, using no control, and exhausting to ambient.

- (h) One (1) Heidelberg sheetfeed offset printing press, identified as press P-8, with a maximum sheet size of 40" x 28" and a maximum capacity of 9,000 sheets per hour, using no control, and exhausting to ambient.
- (i) One (1) Ryobi sheetfeed offset printing press, identified as press P-9, with a maximum sheet size of 12" x 8" and a maximum capacity of 2,000 sheets per hour, using no control, and exhausting to ambient.
- (j) One (1) Ryobi sheetfeed offset printing press, identified as press P-10, with a maximum sheet size of 20" x 12" and a maximum capacity of 3,000 sheets per hour, using no control, and exhausting to ambient.

There are no unpermitted facilities operating at this source during this review process.

Source Definition

The source is a sheetfeed offset lithographic printing plant.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S-1A	Press P-1	9.17	0.83	-	Ambient
S-1B	Press P-1	8.5	0.5	-	Ambient
S-2A	Press P-2	9.33	1.0	-	Ambient
S-2B	Press P-2	6.0	0.67	-	Ambient
S-3A	Press P-3	9.25	0.83	-	Ambient
S-3B	Press P-3	15.17	0.5	-	Ambient
S-4	Press P-4	7.25	0.83	-	Ambient
S-5A	Press P-5	10.25	0.83	-	Ambient
S-5B	Press P-5	10.25	0.83	-	Ambient
S-6A	Press P-6	10.0	0.83	-	Ambient
S-6B	Press P-6	10.0	0.83	-	Ambient
S-7	Press P-7	14.58	0.75 x 1.0	-	Ambient
S-8A	Press P-8	9.83	0.83	-	Ambient
S-8B	Press P-8	16.0	0.5	-	Ambient
S-8C	Press P-8	9.83	0.67	-	Ambient

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on October 6, 2000.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document, pages 1 - 3.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM/PM-10	12.65
SO ₂	Negligible
VOC	16.26
CO	Negligible
NO _x	Negligible

HAP's	Potential To Emit (tons/year)
Hydroquinone	<1
Mn 2-Ethylhexanoate	<1
Glycol Ether	<1
Phosphoric Acid	<1
Acetic Acid	<1
Potassium Hydroxide	<1
Sodium Hydroxide	<1
Pseudocumene	<1
Isopropanol	<1
Methyl Ethyl Ketone	<1
TOTAL	0.34

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in Vigo County.

Pollutant	Status
PM-10	attainment
SO ₂	maintenance
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Vigo County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. Vigo County has been classified as attainment or unclassifiable for the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD) 326 IAC 2-2. See the State Rule Applicability for the source section.

Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM/PM10	1.90
SO ₂	Negligible
VOC	6.63
CO	Negligible
NO _x	Negligible
Single HAP	<1
Combination HAPs	0.34

This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater, no nonattainment pollutant is emitted at a rate of 100 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2 and 2-3 the PSD and Emission Offset requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

Federal Rule Applicability

- (a) This source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60, Subpart QQ), due to their process type. They do offset printing, and that subpart is for publication rotogravure.
- (b) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart KK. Offset printing is not one of the listed printing processes covered by this Subpart (publication rotogravure, product or packaging rotogravure, or wide web flexographic are the types specifically mentioned).
- (c) As this source is not a major source of HAPs, it is not subject to the requirements of the

NESHAPs, Subpart JJJJ.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Vigo County and the limited potential to emit PM10 and VOC is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Visible Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

This source is not located in the small portion of Vigo County subject to the lower opacity standard.

State Rule Applicability - Individual Facilities

Moore Langen Printing is not subject to the requirements of 326 IAC 8-1-6 because it is not a major source of VOCs.

326 IAC 8-5-5 (graphic arts operations)

Moore Langen Printing is not subject to the requirements of 326 IAC 8-5-5 because they utilize offset printing. 326 IAC 8-5-5 only applies to flexographic, packaging rotogravure, and publication rotogravure printing operations.

Conclusion

The operation of this sheetfeed offset printing process shall be subject to the conditions of the attached proposed Registration.

Actual Emissions Inventory

Press #	1	2	3	4	5	6	7	8	9	10
Installation Dates (Year)	1994	1984	2003	1999	2000	1998	1994	2000	1999	1998

HAP Emissions

Wash-up solvent ² (lbs/yr)	10.13	10.13	20.25	45.57	45.57	45.57	40.5	10.13	20.25	20.25
HAP (lbs/yr)	10.13	10.13	20.25	45.57	45.57	45.57	40.5	10.13	20.25	20.25
HAP (lbs/hr)	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.01	0.01
HAP (lbs/day)	0.04	0.04	0.08	0.18	0.18	0.18	0.16	0.04	0.08	0.08
HAP (tpy)	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01	0.01
Entire Plant HAP (tpy)	0.13									

PM Emissions

Powder ⁵ (lbs/yr)	56.08	56.08	112.17	252.37	252.37	252.37	224.33	56.08	112.17	112.17
PM (lbs/hr)	0.03	0.03	0.03	0.05	0.05	0.05	0.07	0.03	0.05	0.05
PM (lbs/day)	0.22	0.22	0.43	0.97	0.97	0.97	0.86	0.22	0.43	0.43
PM (tpy)	0.03	0.03	0.06	0.13	0.13	0.13	0.11	0.03	0.06	0.06
Entire Plant Total PM (tpy)	0.74									

NOTES

¹ Isopropyl alcohol use = Divide annual total by 12 for monthly use. (3 barrels/yr) x (55 gal/barrel) x (1 yr/12 months)

² 1 drum/month of waste. Assume 2/3 of waste is solvent (Mr. Werling, President, April 20, 2000). 1 drum = approx 55 gallons. Approximately 37 gallons are used each month. Wash up solvent use = [(press hrs/day)/total press hrs] x [Estimated total monthly solvent use = 37 gals/month].

³ 1999 ink usage = 43,096 lbs/yr (Per Sandra Sherer, Corporate Controller, April 20, 2000). Ink use = [(press hours/day)/ink hours] x [total lbs/yr ink used].

⁴ 1999 coating usage = press #1 & #2, 8,440 lbs/yr; press #7 3,646 lbs/yr (Per Sandra Sherer's fax, June 9, 2000). Coating use: press#1 & #2 = 8,440/2 = 4,220 lbs each.

⁵ 1999 powder usage = 66 lbs/month (Per Sandra Sherer, Corporate Controller, April 20, 2000). Powder use = [(press hours/day)/powder hours] x [total lbs/yr of powder used].

EMISSIONS CALCULATIONS

VOC Emissions (lbs/yr)

Wash-up solvents = Usage (gals/month) x 12 months/year x density (lbs/gal) x VOC % by weight

Inks = Usage (gals/yr) x density (lbs/gal) x VOC % by weight x (100 - % solvent remaining in product). From AP-42, Table 4.9.1-1 Typical Parameters for Computing Solvent Emissions from Printing Lines

Coatings = Usage (lbs/yr) x VOC % by weight x (100 - % solvent remaining in product). From AP-42, Table 4.9.1-1 Typical Parameters for Computing Solvent Emissions from Printing Lines

Isopropyl alcohol = Usage (gals/month) x 12 months/yr x density (lbs/gal) x VOC & by weight x (100 - % solvent remaining in product). From AP-42, Table 4.9.1-1 Typical Parameters for Computing Solvent Emissions from Printing Lines

VOC Emissions (lbs/hr) = Average VOC (lbs/yr)/Maximum Operating Hours (hrs/yr)

VOC Emissions (lbs/day) = VOC Emissions (lbs/hr) x (hrs/day)

VOC Emissions (tpy) = VOC Emissions (lbs/yr) x (1 ton/2000 lbs)

HAP Emissions (lbs/yr)

Wash-up solvents = Usage (gals/month) x 12 months/year x density (lbs/gal) x HAP % by weight

HAP Emissions (lbs/hr) = HAP (lbs/yr)/Maximum Operating Hours (hrs/yr)

HAP Emissions (lbs/day) = HAP Emissions (lbs/hr) x (hrs/day)

HAP Emissions (tpy) = HAP Emissions (lbs/yr) x (1 ton/2000 lbs)

PM Emissions (lbs/yr)

Powder usage (lbs/month) x 12 months/yr x Material density (lbs/gal) x % weight solids

PM Emissions (lbs/hr) = PM Emissions (lbs/yr)/Maximum Operating Hours (hrs/yr)

PM Emissions (lbs/day) = PM Emissions (lbs/hr) x (hrs/day)

PM Emissions (tpy) = PM Emissions (lbs/yr) x (1 ton/2000 lbs)

Potential Emissions Inventory

Press #	1	2	3	4	5	6	7	8	9	10
Installation Dates (Year)	1994	1984	2003	1999	2000	1998	1994	2000	1999	1998
Manufacturer	OMCSA	OMCSA	MITSU	MITSU	MITSU	MITSU	SAKURAI	HEIDELBURG	RYOBI	RYOBI
Type	UV	UV	Ink	Ink	Ink	Ink	UV	Ink	Ink	Ink

VOC Potential Emissions

VOC (lbs/hr) ^a	0.17	0.17	0.42	0.47	0.47	0.47	0.22	0.26	0.53	0.53
VOC (lbs/day)	4.09	4.09	10.06	11.36	11.36	11.36	5.25	6.31	12.60	12.60
VOC (tpy)	0.75	0.75	1.84	2.07	2.07	2.07	0.96	1.15	2.30	2.30
Exempt/Registration/Construction/Operation Permit	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
Entire Plant VOC (tpy)	16.26									
Major/Minor Source:	Minor									

HAP Potential Emissions

HAP (lbs/hr) ^a	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.01	0.01
HAP (lbs/day)	0.12	0.12	0.12	0.21	0.21	0.21	0.31	0.12	0.23	0.23
HAP (tpy)	0.02	0.02	0.02	0.04	0.04	0.04	0.06	0.02	0.04	0.04
Exempt/Registration/Construction/Operation Permit	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
Entire Plant VOC (tpy)	0.34									
Major/Minor Source:	Minor									

PM Potential Emissions

PM (lbs/hr) ^a	0.03	0.03	0.03	0.05	0.05	0.05	0.07	0.03	0.05	0.05
PM (lbs/day)	0.65	0.65	0.65	1.16	1.16	1.16	1.73	0.65	1.29	1.29
PM (tpy)	0.12	0.12	0.12	0.21	0.21	0.21	0.31	0.12	0.24	0.24
Exempt/Registration/Construction/Operation Permit	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
Entire Plant Total PM (tpy)	1.90									
Major/Minor Source:	Minor									

NOTE

^a Potential Emissions in lbs/hr were calculated as follows: Estimated VOC Emissions (lbs/yr)/Maximum Operating Hours (hrs/yr)

EMISSION CALCULATIONS

lbs/day = (lbs/hr) x (24 hrs/day)

tpy = (lbs/hr) x (24 hrs/day) x (365 days/yr) x (1 ton/2000 lbs)